

Entrapment of a diagnostic catheter in a novel multipolar basket catheter (Orion™) during right atrial mapping

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A 73-year-old female patient was referred to our institution for electrophysiological testing. Radiofrequency catheter ablation was performed using a 3D mapping system (Rhythmia, Boston Scientific, Boston, MA, USA) due to the differential diagnosis of an atrial tachycardia. Quadripolar diagnostic catheters (JSN, 5 Fr, 10 mm spacing, St Jude Medical, St Paul, MN, USA) were positioned at the high right atrium (HRA), the coronary sinus (CS) and in the right ventricle (RV). After the induction of the tachycardia after atropine administration, the right atrium was electroanatomically mapped with the Rhythmia mapping system using a sensor-based 64 electrode basket catheter (IntellaMap Orion™, Boston Scientific, Boston, MA, USA) in combination with a long sheath (SR0, St Jude Medical, St Paul, MN, USA). An atypical atrioventricular nodal re-entrant tachycardia was identified, and successful ablation of the slow pathway was performed using a 4 mm ablation catheter (Blazer II, Boston Scientific, Boston, MA, USA). At the end of the procedure, however, the basket catheter could not be pulled back into the long sheath. No suspicious findings could be identified on fluoroscopy. After reopening and closing the basket without resolving the issue, it was decided to remove the basket catheter together with the sheath. The JSN catheter (HRA) was found to be entrapped within the splines of the basket catheter preventing the retraction into the sheath. Most likely during mapping of the right atrium and pulling the Orion™ catheter down to the lower right atrium, we captured the HRA catheter between two splines and entrapped it when closing the splines. Removing the sheath with the Orion™ together with the entrapped catheter did not result in any complications in our patient. A 'figure-of-eight' suture was used to achieve haemostasis.

In conclusion, when using a multipolar basket catheter in the heart, entrapment of other catheters within the basket catheter must be considered if the removal requires abnormally high force. Advancing and reopening the Orion™ catheter in order to be able to first remove all other catheters is advisable.

